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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/597,681	11/14/2006	Makoto Hosoya	P30361	4840
7055 7590 01/02/2008 GREENBLUM & BERNSTEIN, P.L.C. 1950 ROLAND CLARKE PLACE RESTON, VA 20191			EXAMINER BARRY, CHESTER T	
			ART UNIT 1797	PAPER NUMBER
			NOTIFICATION DATE 01/02/2008	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/597,681

Applicant(s)

HOSOYA, MAKOTO

Examiner

Chester T. Barry

Art Unit

1797

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 November 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 11/14/06.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

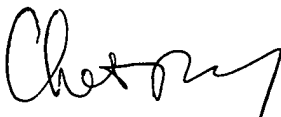
Claims 1-6 and 8 are rejected under 35 USC Sec 102(b) as anticipated by US 2004/0084376 or JP 2000-153293.

US 2004/0084376 discloses the purification of groundwater contaminated with nitrate nitrogen by making porous starch-based biodegradable plastic that is poorly soluble in water when starch content is 60 wt% or greater into a carbon source or denitrifying bacterial immobilization carrier, and the enclosure of a dry carrier to immobilize bacteria. The starch C/N ratio is 6 or greater.

JP 2000-153293 discloses making a biodegradable plastic treated with porous media in a tank with poor drainage with a natural polymer such as starch into a fixed bed. The starch C/N ratio is 6 or greater.

Claim 7 is rejected under 35 USC Sec 103(a) as obvious over US 2004/0084376, JP 2000-153293, and JP 11-114593 A. The inventions in these three disclosures have the same technical problem, which is the addition of a carbon source as needed for denitrification. The use of biodegradable plastic of the inventions in US 2004/0084376 and JP 2000-153293 in order to solve this shared technical problem as a carbon source disposed in a water tank for aquarium fish described in JP 11-114593 would have been obvious to a person having ordinary skill in the art.

Claim 9 is rejected under 35 USC Sec 103(a) as obvious over US 2004/0084376, JP 2000-153293, JP 11-114593 A, and JP 2002-273471. Claim 9 would have been obvious over these four references. The inventions disclosed there have the same technical problem, which is the addition of a carbon source as needed for denitrification. It would have been obvious to have used the biodegradable plastic described in the US published application and JP 2000-153293 A as a carbon source placed in an area of oxygen-deficient water described in JP 11-114593 A and JP 2002-273471 A.


CHESTERT.BARRY
PRIMARY EXAMINER